

Your Health Research Dollars at Work

An Update from the Canadian Institutes of Health Research

President's Message



Partnerships Make for Better Health

Turning health research into health benefits for Canadians depends on effective partnerships. Parliamentarians understood this fact when they crafted the legislation that created the Canadian

Institutes of Health Research (CIHR) in 2000. Our legislation empowers us to engage in and foster collaborations with organizations throughout health research communities in Canada and abroad. And we do.

Partnerships are at the centre of how CIHR does business. In Canada, we are collaborating with a wide range of organizations, including federal and provincial government agencies, national health charities and industry. We have also established a number of high profile international research collaborations with funding agencies in other countries. Last year, our partners contributed an additional \$90 million to collaborative health research initiatives.

Our partners do much more than provide additional financial resources. By bringing experts and the views of their communities to the table, our partners make an invaluable contribution to the process of identifying and clearly defining research priorities. They also play a critical role in translating research findings into exciting new technologies with commercial potential and into new ways of treating or preventing illness.

Moving forward, CIHR is committed to building and nurturing our partnerships so that together we continue to transform health research into a healthier future for Canadians.

Pierre Chartrand, PhD
Acting President, Canadian Institutes of Health Research

TIME'S TOP 10

CIHR-Funded Research Top Medical Discovery for 2007



University of Manitoba researcher, Dr. Stephen Moses, was the co-principal investigator in Kenya.

A landmark study that found circumcised men are better protected against HIV has been named the biggest medical breakthrough of 2007 by *Time* magazine.

Two randomized controlled trials funded by CIHR and the US National Institutes of Health (NIH) followed thousands of HIV-negative men in Rakai, Uganda, and Kisumu, Kenya, over several years. The results: circumcised men were about 53% less likely than uncircumcised men to acquire HIV during heterosexual sex.

The astounding findings prompted the NIH to stop both trials prior to their completion and offer circumcision to all the men in the study. The prestigious medical journal *Lancet* called the discovery "a new era for HIV prevention."

"Now we have conclusive data demonstrating that male circumcision reduces the risk of HIV acquisition in men," says Dr. Stephen Moses, a leading researcher at the University of Manitoba who collaborated with scientists at the University of Nairobi, Kenya, and the University of Illinois on this landmark study.

"Effective strategies for HIV/AIDS prevention are urgently needed in countries with high prevalence rates, and such reliable data showing a protective effect will be of great value to health policy makers from around the world", said Dr. John Frank, Scientific Director of CIHR's Institute of Population and Public Health. "This study is a clear example of Canadian excellence in health research working together with researchers in affected countries."

About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency for health research. CIHR's mission is to create new scientific knowledge and to catalyze its translation into improved health, more effective health services and products, and a strengthened Canadian health-care system. Composed of 13 Institutes, CIHR provides leadership and support to more than 11,000 health researchers and trainees across Canada.

NATIONAL

Inaugural CIHR President Among G&M Nation Builders

Dr. Alan Bernstein's leadership in reforming Canada's health research enterprise won accolades from the *Globe and Mail* in December. He was one of five finalists selected from a list of nearly 900 nominated for the 2007 Nation Builder, which honours individuals who have made a major contribution to Canadian society. The article recognized Dr. Bernstein's leadership and vision in guiding CIHR's transformation in 2000 into a new health research agency that, in addition to funding basic and clinical science, also supports research on health systems and services, and on the social, cultural and environmental factors that affect health. CIHR is lauded internationally as a model for health research, the article noted.



Dr. Alan Bernstein

WESTERN CANADA

Protein Therapy Could Stifle Growth of Cancer Cells

Vancouver: Dr. Sandra Dunn at the University of British Columbia is developing a new therapy that may help many of the one million women who will be diagnosed with breast cancer this year. Her research is focusing on inhibiting the growth of a protein (YB-1) that promotes aggressive forms of breast and prostate cancer and makes the body more resistant to cancer-controlling drugs. CIHR is providing critical proof of principle funding to help move this promising research closer to clinical trials and commercial development.



Dr. Sandra Dunn (back row, left) and her team

INTERNATIONAL

Lou Gehrig's Vaccine One Step Closer

Quebec City, Cambridge, Massachusetts: CIHR-funded researchers at Laval University and colleagues at Harvard University are working on a promising vaccine for people suffering from amyotrophic lateral sclerosis (ALS), a devastating neuromuscular disorder also known as Lou Gehrig's disease. Laval's Dr. Jean-Pierre Julien and Harvard's Dr. Robert Brown are developing a vaccine able to create antibodies that trigger the immune system to attack a rogue protein found in some ALS patients. Clinical trials for the vaccine could begin within two to three years. Some 3,000 Canadians live with ALS and most will die from it within two to five years of their diagnosis.

Babies More Likely to Eat Veggies if Mom Does

Canada, United States: CIHR postdoctoral fellow Catherine Forestell and biopsychologist Julie Mennella have found that babies are more accepting of fruits and vegetables if their moms eat healthy foods while breastfeeding. The study, partly funded by CIHR and conducted at the Monell Chemical Senses Centre in Philadelphia, found that repeated exposure to a food – in this case pureed green beans – resulted in greater consumption. The study could provide parents and policy-makers with new ammunition in the battle against childhood obesity.



Dr. Catherine Forestell

Researchers Develop Safer Alternative to Amniocentesis

Winnipeg: Expectant mothers could soon find out if their unborn baby has Down syndrome by taking a simple blood test – a much safer and easier alternative to amniocentesis, which can cause a miscarriage. One CIHR-funded team, led by Dr. Andrew MacRae at the University of Manitoba, is validating two new maternal blood tests which, if successful, could reduce the number of women who need an amniocentesis by more than half. A similar maternal blood test is being developed as part of a separate CIHR project led by Dr. Régen Drouin at Sherbrooke University.

Short Bouts of Exercise Can Lead to Better Bone Health in Children

Vancouver: Simple changes in a child's activity level can significantly strengthen bones, says CIHR-funded researcher Dr. Heather McKay. The University of British Columbia and Vancouver Coastal Health Research Institute scientist is collaborating with Dr. Patti-Jean Naylor at the University of Victoria on Action Schools! BC, a program designed to reduce children's risk of developing chronic disease by



Dr. Heather McKay (right) and Dr. P-J. Naylor.

introducing more exercise and better nutrition into elementary schools. Based in part on the positive outcomes related to Action Schools! BC, daily physical activity has recently become a part of school policy in BC. The Heart and Stroke Foundation is also a partner in the project.

New Drug Could Ward Off Lethal Asthma Attacks

Calgary: A severe asthma attack can be fatal if not treated immediately. To minimize this risk, a team of researchers at the University of Calgary is tapping into a unique CIHR commercialization fund to develop a simple device that could be used in hospital emergency rooms or carried by asthma sufferers in case of an attack. Led by Dr. Francis Green, the team designed a new type of medication that targets the diseased part of the airway to remove the obstruction and rapidly open the airway. Conventional drugs used for treating asthma are not able to penetrate the obstructed areas.

CIHR Invests in Calgary Brain Research Institute



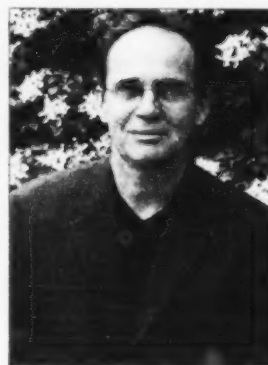
Minister Prentice with University of Calgary researcher Dr. Jaideep Bains

continue to affect Canadians," said Industry Minister Jim Prentice, who made the announcement December 17, 2007, on behalf of Health Minister Tony Clement. Lost productivity from poor mental health is estimated to cost Canadian businesses \$33 billion per year.

Calgary: The University of Calgary's Hotchkiss Brain Institute is receiving more than \$5 million for a wide range of brain research projects, including projects in the areas of epilepsy, stroke, movement disorders, stress, depression and workplace mental health. "Through CIHR, Canada's government is ensuring that important research can be done for various health issues that

CENTRAL CANADA

Vaccine May Extend Life of People with Lou Gehrig's



Dr. George Adams

Toronto: Amorfix Life Sciences, a spinoff of CIHR-funded research, is moving closer to market with a vaccine for amyotrophic lateral sclerosis (ALS), known as Lou Gehrig's disease. The company has now successfully demonstrated two vaccine therapies that have extended

the life in a mouse model of ALS. "These results support our original belief that specifically targeting misfolded proteins using immunotherapies may lead to an effective treatment for this debilitating disease, and by extension, numerous other diseases such as Parkinson's and Alzheimer's diseases," said Dr. George Adams, CEO of Amorfix Life Sciences.

Folic Acid Slows Brain Damage Caused by Alcohol Abuse

Toronto: A CIHR study with groundbreaking public health implications for treating alcoholism and preventing fetal alcohol syndrome has shown that folic acid can lessen the neurotoxicity caused by formic acid, a by-product of methanol found as a contaminant in many alcoholic beverages. The study was led by Dr. Bhushan Kapur of the Department of Clinical Pathology at the Sunnybrook Health Sciences Centre, in collaboration with Dr. Peter Carlen of the Department of Neurosciences at the University Health Network. "Because the neurotoxicity of formic acid can be greatly slowed by administering folic acid, which is inexpensive and readily available, the public health impact is staggering in terms of treating alcohol abusers and possibly preventing the serious effects of fetal alcohol syndrome," says Dr. Kapur.



Dr. William Molloy

Research Study Aims to Prevent Alzheimer's Disease

Hamilton: A new CIHR-funded study is developing what could be the first treatment to modify Alzheimer's disease – rather than merely treating the symptoms. Dr. William Molloy, St. Peter's McMaster Chair in Aging and Professor of Medicine at McMaster University, is studying the effects of the antibiotics Doxycycline and Rifampicin on the rate of decline of cognitive function in patients with mild to moderate dementia. The trial will include about 500 patients from Niagara, Hamilton, Toronto, North Bay, Saint John (NB), Halifax, London, Peterborough, Simcoe and Kitchener. The research is featured in a new documentary entitled, *The Silent Tidal Wave*, produced by Open Daily Films.

Study Discovers Genes Linking Stress, High Blood Pressure and Addiction

Quebec City: A research team funded by CIHR and the Heart and Stroke Foundation has identified a series of related genes that put some people at high risk of mental stress, high blood pressure, alcoholism and tobacco addiction. The findings could help identify individuals who could benefit the most from a heart-healthy lifestyle. "Knowing that there is a gene that produces the symptoms we associate with mental stress means we can bypass the expression of that gene by avoiding stress-provoking situations," says lead researcher Dr. Pavel Hamet of the University of Montreal.

Physical Exercise May Make You a Better Driver

Thunder Bay: Harpreet Chattha wants to find out if physical activity helps make older drivers more alert and physically responsive behind the wheel. The Lakehead University PhD student is leading a two-year CIHR study to examine the effect of a specially designed fitness program for older drivers. Finding a link between physical activity and cognitive and physical abilities could offer new hope for the growing number of older Canadians who want to continue driving.

CIHR's *Your Health Research Dollars at Work* is available to Members of Parliament, Senators and policy-makers to communicate the benefits of the Government of Canada's investment in health research.

News items can be reproduced for use in householders and other communications materials. Visit CIHR's website to download this issue in electronic form: www.cihr-irsc.gc.ca.

CIHR has also produced an information kit called *Your Health Research Dollars at Work 2006-2007*, which provides a snapshot of the research results that are making a difference to the health of Canadians, to our health-care system and to our economy. If you would like a copy, please contact Caroline Kay, CIHR's Production Coordinator, at caroline.kay@cihr-irsc.gc.ca.

EASTERN CANADA

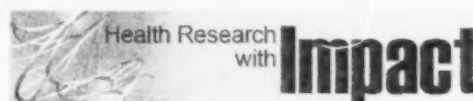
Decreasing Children's Pain Focus of Dalhousie Study

Halifax: According to child psychologist Dr. Christine Chambers, lack of sleep may be causing the recurring headaches and stomach aches that are common complaints among children and adolescents. With CIHR support, the Dalhousie University researcher has recruited 200 adolescents to participate in two separate studies that could result in improved approaches for assessing and treating pain in children. "As we learn more, we can direct public policy around pain management systems for kids. Overall, this bodes well for children, their families and the health-care system," says Dr. Chambers.



Dr. Christine Chambers with Claudia Watt

Photo Credit: Danny Arnel, Dalhousie University



Health Research Has Real Impact

We know this, researchers know this, but what about Canadians and decision-makers? To help share the wonderful stories in the CIHR Annual Report 2006-2007 and to help launch a new interactive timeline of health research milestones, we have added a new page on the CIHR website dedicated to serving the information needs of Canadians. This web page, entitled "Health Research with Impact", brings together content for the Canadian public in a single, easy-to-navigate location. Visit www.cihr-irsc.gc.ca/e/32495.html to learn more about the history of health research in Canada, exciting CIHR-funded projects, monthly research profiles and CIHR community outreach programs.

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ISSN 1916-338X

Upcoming Events

Each month: Café Scientifiques in cities across Canada dealing with topical health issues. (www.cafescientifique.cihr.gc.ca)